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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/589,266   | 08/14/2006  | Yuji Hase            | 294482US2PCT        | 6044             |
| 22850  | 7590        | 12/24/2008           | EXAMINER            |                  |
| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.<br>1940 DUKE STREET<br>ALEXANDRIA, VA 22314 |             |                      |                     | ALEMU, EPHREM    |
| ART UNIT   |             | PAPER NUMBER         |                     |                  |
| 2821   |             |                      |                     |                  |
| NOTIFICATION DATE  |             |                      | DELIVERY MODE       |                  |
| 12/24/2008   |             |                      | ELECTRONIC          |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/589,266             | HASE ET AL.         |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Ephrem Alemu           | 2821                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 14 August 2006.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 11-24 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 11,12 and 22-24 is/are rejected.  
 7) Claim(s) 13-21 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 14 August 2006 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 8/14/2006.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “the ON/OFF timings of the power supply switching element being determined on the basis of a period of a current passing through a secondary winding of the transformer or on the basis of a period of a current passing through the first switching element and the second switching element” in a manner claimed in claims 13-16; “wherein power supply timings from the DC power supply to the discharge lamp are determined on the basis of a period of a load current” as claimed in claim 17; “wherein an operation performing intermittently the power supply is performed at the time of the cold start of the discharge lamp or when the impedance of the discharge lamp is low” in a manner claimed in claims 18 and 19; must be shown or the features canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

2. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 22 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Shih (US 6,583,586).

Re claim 22 and 24, Shih discloses a discharge lamp lighting apparatus comprising: a DC power supply (DC) for supplying power to a discharge lamp (Figs. 1, 2); a transformer (T1) for transmitting a voltage of the DC power supply to the discharge lamp (Lp) (Figs. 1, 2); a power supply switching element (Q1) connected between the DC power supply and a primary side of the transformer (T1) (Figs. 1, 2); and a first switching element (Q3) and a

second switching element (Q2) that are connected to the primary side of the transformer (T1); wherein there are provided; a term to supply power from the DC power supply when the power supply switching element is turned on, and either the first switching element or the second switching element is turned on; and a term to pass a current through the primary side of the transformer when the power supply switching element is turned off, and the first switching element and the second switching element are turned on at the same time, whereby power is intermittently supplied from the DC power supply to the transformer, and when power is not supplied from the DC power supply to the transformer, a current passing through the primary side of the transformer is circulated (Figs. 1, 2; Col. 2, line 1- Col. 3, line 26).

5. Claims 11, 12 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Harada et al. (US 7,023,143).

Re claims 11 and 23, Harada discloses a discharge lamp lighting apparatus comprising: a DC power supply (1) for supplying power to a high intensity discharge lamp (7); a conversion circuit (DC-AC inverter circuit 4), including a switching element (4a, 4b) for converting the voltage of the DC power supply (1) into a high frequency; and an LC resonance circuit (5g, 5f) between the discharge lamp (7) and the conversion circuit (DC-AC inverter circuit 4); wherein by opening and closing operations of the switching element (4a, 4b), power supply from the DC power supply (1) to the discharge lamp is intermittently performed, and wherein when the power is not supplied from the DC power supply, a resonance current passing through the resonance circuit (5f, 5g) is circulated through the switching element (4a, 4b) (Fig. 1; Col. 5, lines 29-60).

Re claim 12, Harada further shows the conversion circuit (DC-AC inverter circuit 4) includes: a transformer (4c); a power supply switching element (2c) connected between the DC

power supply (1) and a primary winding of the transformer (4c); and first and second switching elements (4a, 4b) that are connected to a primary side of the transformer (4c), wherein the resonance current passing through the LC resonance circuit (5f, 5g) is circulated through the transformer (4c) on the primary side of the transformer (4c) (Fig. 1; Col. 5, lines 29-60).

***Allowable Subject Matter***

6. Claims 13-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims; and further overcoming the drawing objection as set forth in paragraph 1.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kohno (US 2003/0151931); also teaches similar inventive subject matter.

***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (571) 272-1818. The examiner can normally be reached on M-F 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EA  
12/18/08

/Douglas W Owens/  
Supervisory Patent Examiner, Art Unit 2821  
December 19, 2008